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Toughness as a function of as-cast grain size

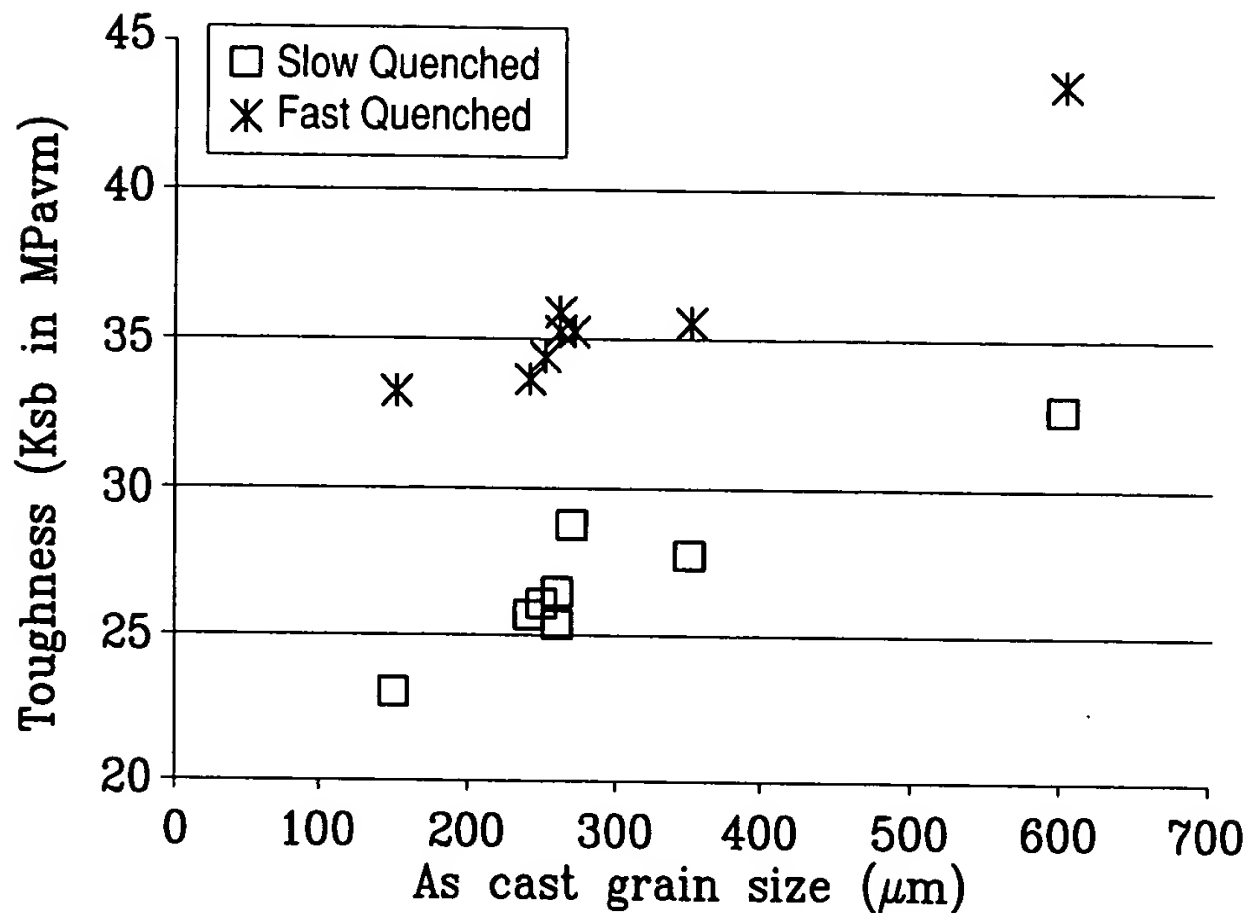


FIG. 1

Illustration of toughness improvements for the invention plate with respect to the control specimens

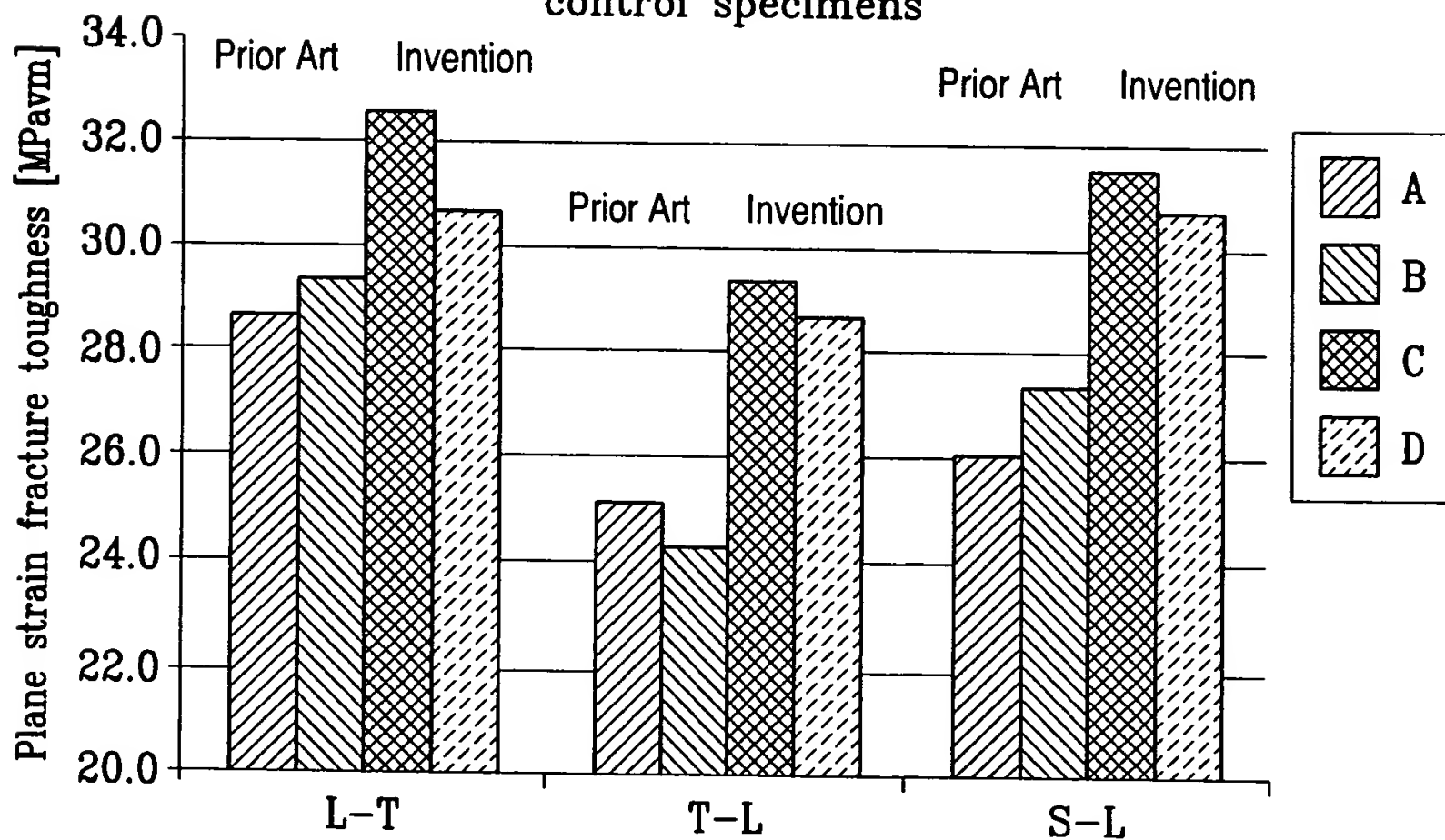


FIG. 2

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Relationship between average intercept distances and fracture toughness

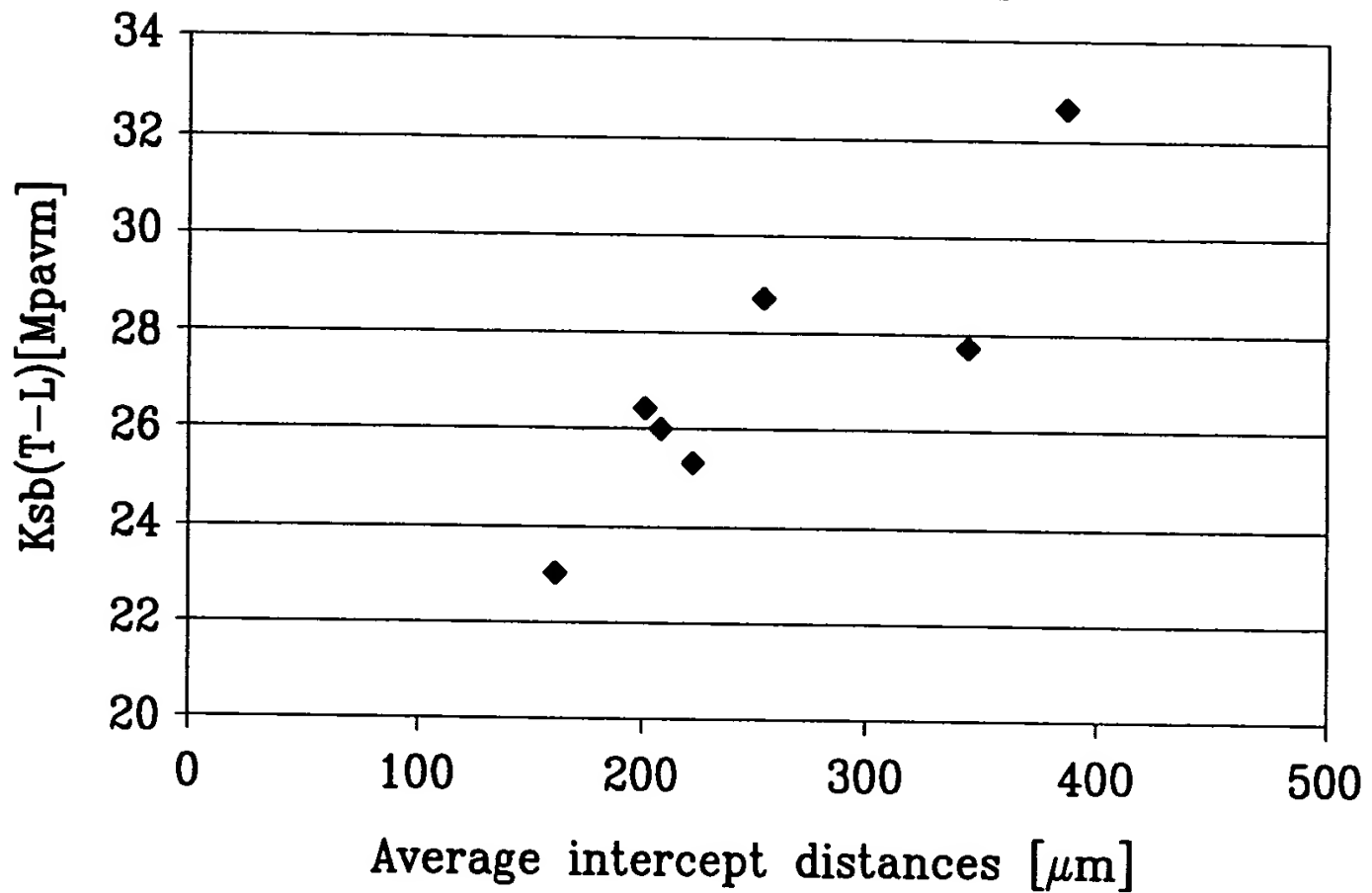


FIG. 3

Schematic illustration of the approach used to quantify the characteristic intercept distance between recrystallized zones for the products described above

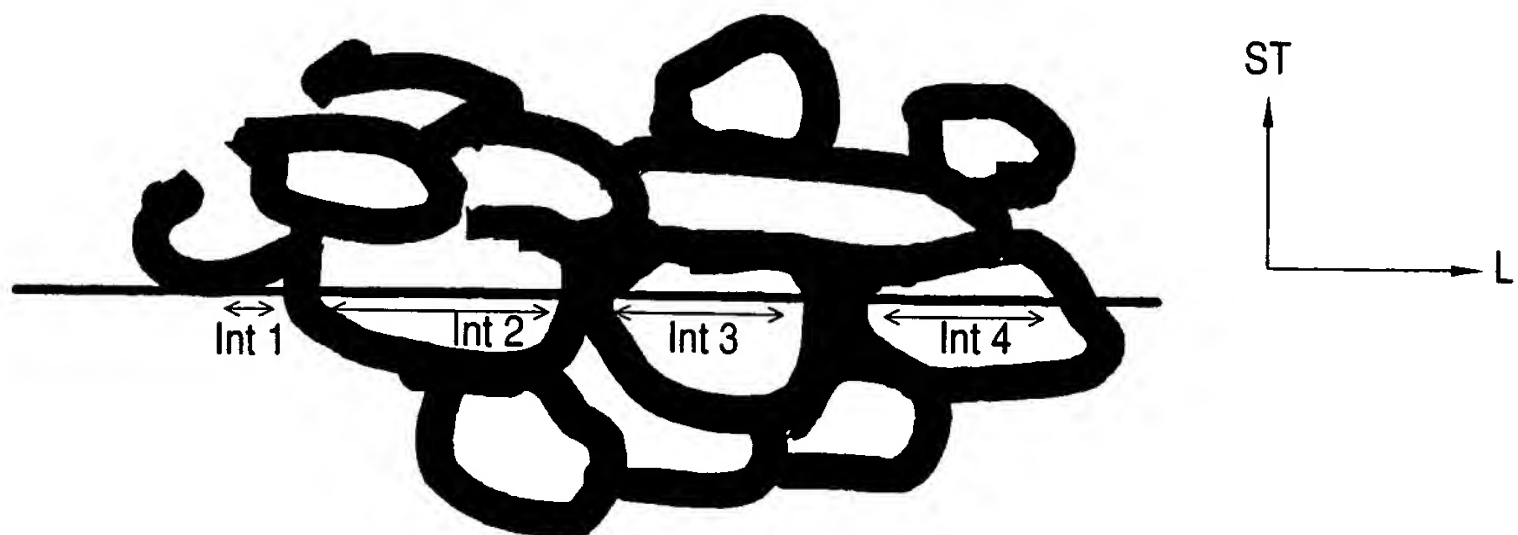


FIG. 4

— Recrystallized region of microstructure

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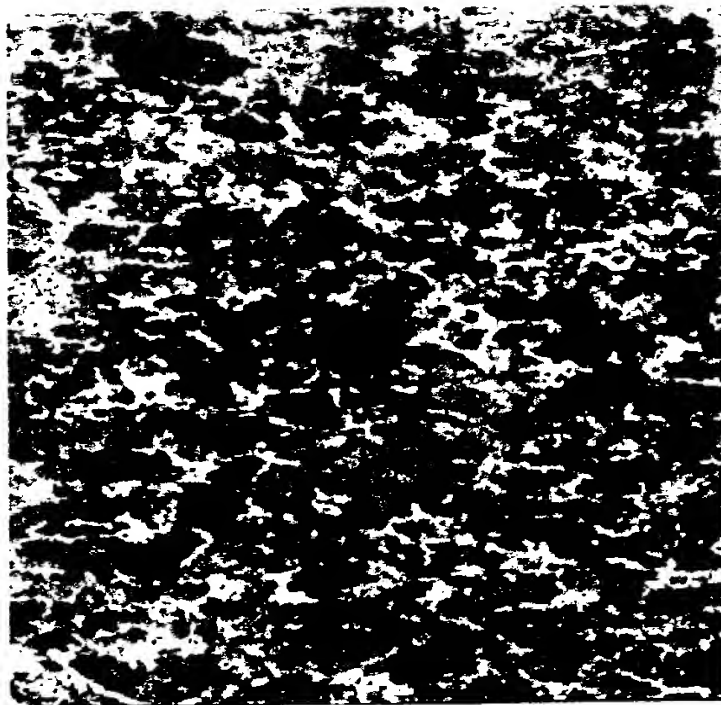


FIG. 5a

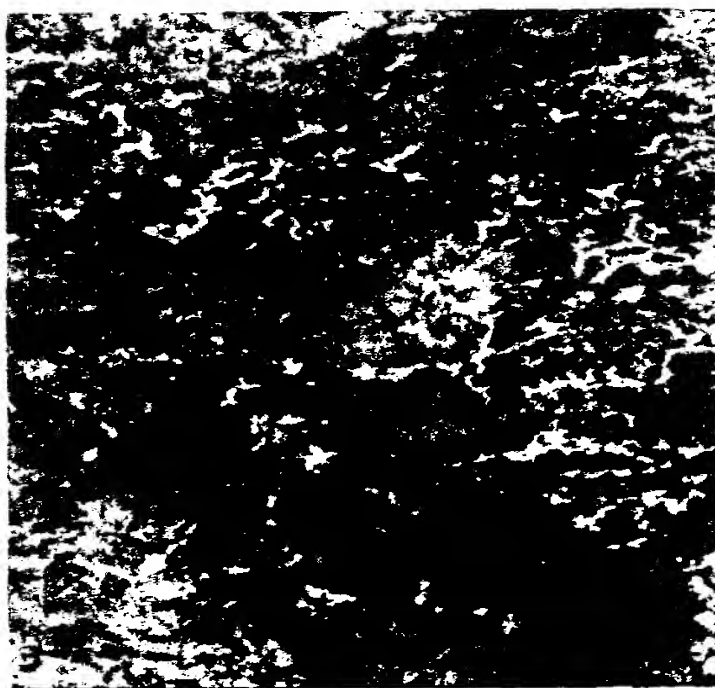


FIG. 5b